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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,851	12/21/2005	Erwin Rinaldo Meinders	NL030739	3216

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EXAMINER

BIBBINS, LATANYA

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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11/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,851

Applicant(s)

MEINDERS ET AL.

Examiner

LaTanya Bibbins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: the specification is inconsistent with the preferred/suggested guidelines for the layout of the specification. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.

- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 3, 5, 7, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoi et al. (US Patent Number 5,732,062).**

Regarding claim 1, Yokoi discloses a method of recording marks representing data in an information layer of a write-once record carrier by irradiating the information layer by means of a radiation beam, wherein a mark is written by a write pulse and said information layer comprises an organic material, characterized in that said write pulse comprises a front portion having a write power level increasing with time (see the discussion in column 12 lines 34-39 and the write pulse illustrated in Figure 7 where the head heating pulses Af and Ar are regarded as the claimed "front portion").

Regarding claim 3, Yokoi discloses the method as claimed in claim 1, wherein said front portion consists of n sub-portions, n being an integer number larger than 1, the i-th sub-portion having an i-th write power level, i being an integer number in the range between 1 and n, the i-th portion preceding the (i+1)-th portion, and wherein the i-

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th write power level is lower than the (i+1)-th write power level (see Figure 7 where the head heating pulses Af and Ar are regarded as the claimed "front portion," the i-th and (i+1)-th portions are represented by Af and Ar respectively and the i-th and (i+1)-th write power levels are 11 mW and 13mW respectively).

Regarding claim 5, Yokoi discloses the method as claimed in claim 1, wherein said front portion has an end portion having an increased write power level which is higher than a normal write power level of the subsequent portions (32) of the write pulse (see Figure 7 where the end portion of the front portion is represented by Ar and has an increased write power level of 13mW with respect to the normal write power level of 11 mW).

Regarding claim 7, Yokoi discloses the method as claimed in claim 1, wherein the front portion of the write pulse has a time length smaller or larger than $1T$, T representing the length of one period of a reference clock (see Figure 7 where pulses Af and Ar, which are regarded as the claimed "front portion," have a time length of $1.5T$ which is larger than $1T$).

Regarding claim 10, Yokoi discloses the method as claimed in claim 1, wherein said write pulse has, except for the front portion, a block-shaped form having a substantially constant, gradually decreasing or slightly pulsed power level (see Figure 11 element B of the write pulse which has a block-shaped form having a slightly pulsed power level).

Regarding claim 11, Yokoi discloses a recording device for recording marks representing data in an information layer of a write-once record carrier by irradiating the

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information layer by means of a radiation beam, wherein a mark is written by a write pulse and wherein said information layer comprises an organic material, the device comprising a radiation source for providing the radiation beam (see the semiconductor laser, LD, illustrated in Figure 6) and a control unit operative for controlling the power of the radiation beam and for providing the write pulse for recording the marks (see the discussion of the light intensity control means in column 11 lines 49-57), characterized in that the control unit is operative for controlling the power of the radiation beam such that said write pulse comprises a front portion having a write power level increasing with time (see the discussion in column 12 lines 34-39 and the write pulse illustrated in Figure 7 where the head heating pulses Af and Ar are regarded as the claimed "front portion").

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. (US Patent Number 5,732,062) in view of Wilkinson et al. (US Patent Number 6,570,840 B1).**

Regarding claim 2, Yokoi discloses the method as claimed in claim 1, and noted in the 35 U.S.C. 102(b) rejection above, but fails to disclose wherein said front portion

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has a write power level which is continuously increasing with time. Wilkinson, however, discloses wherein said front portion has a write power level which is continuously increasing with time (see the discussion in column 6 lines 27-39 and column 28 line 61 through column 29 line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a front portion with a write power level continuously increasing with time as disclosed by Wilkinson into the method disclosed by Yokoi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to produce recording marks with leading ends and trailing ends having the same shape as suggested by Wilkinson in column 6 lines 27-29.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. (US Patent Number 5,732,062) in view of Dekker et al. (US Patent Number 7,272,094 B2).

Regarding claim 4, Yokoi discloses the method as claimed in claim 3, and noted in the 35 U.S.C. 102(b) rejection above but fails to disclose wherein said front portion consists of n portions of substantially the same duration. Dekker, however, discloses wherein said front portion consists of n portions of substantially the same duration (see the 6T recording mark illustrated in Figure 1b).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the write strategy of Dekker with the method

of Yokoi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to reduce jitter (as noted by Dekker in column 3 line 65 – column 4 line 8).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. (US Patent Number 5,732,062) in view of Nobukuni et al. (US PgPub Number 2006/0013098 A1).

Regarding claim 6, Yokoi discloses the method as claimed in claim 1, and noted in the 35 U.S.C. 102(b) rejection above but fails to disclose wherein said front portion has a time length of T and the remaining portion of the write pulse has a time length of $(x-1)T$. Nobukuni, however, discloses wherein said write pulse comprises a time length of xT for writing a xT mark, x being an integer number larger than 1 and T representing the length of one period of a reference clock, and wherein said front portion has a time length of T and the remaining portion of the write pulse has a time length of $(x-1)T$ (see the discussion in paragraphs [0324]-[0326] and Figure 9, specifically the $11T$, $10T$, $9T$, $8T$, $7T$, $6T$, $5T$, and $4T$ recording marks where the time length of the front portion of the write pulses is $1T$).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the write pulse strategy of Nobukuni into the method of Yokoi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to reduce jitter (as discussed in paragraphs [0325] and [0326]).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. (US Patent Number 5,732,062), herein Yokoi '062, in view of Yokoi (US Patent Number 6,771,577 B2), herein Yokoi '577.

Regarding claim 9, Yokoi '062 discloses method as claimed in claim 1, and noted in the 35 U.S.C. 102(b) rejection above but fails to disclose wherein write pulses comprising a front portion having a time length which increases with increasing recording velocity. Yokoi '577, however discloses wherein write pulses comprising a front portion having a time length which is dependent on the recording velocity, in particular which is increasing with an increasing recording velocity (see Figures 3 and 4 and the discussion in column 9 lines 20-43 regarding the relationship between the front portion of the write pulse, T_{top} , and the recording velocity).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was incorporate the write strategy of Yokoi '577 with the method of Yokoi '062. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to apply the optimal amount of heat to the mark head portion and to record information with optimal recording power thus maintaining good jitter characteristics (see column 9 lines 35-43 of Yokoi '577)

Allowable Subject Matter

10. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, none of the references of record, alone or in combination suggest or fairly teach the method as claimed in claim 1, wherein write pulses comprising a front portion having a write power level increasing with time are **only used for recording marks after short spaces, in particular after spaces having a time length of yT , y being 3 for a CD or DVD record carrier and being 2 for a BD record carrier.**

Citation of Relevant Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sasaki et al. (US PGPub Number 2002/0021642 A1) disclose a method for recording on a write-once type optical disc. A laser light beam excited to light emission by a recording pulse having a pulse width corresponding to the length of a pit formed, with the recording power of substantially the leading end of the pulse being stepped over plural stages, is illuminated on a write-once type optical disc for recording. This enables recording with an optimal pit shape at a speed faster than a quadrupled speed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LaTanya Bibbins

/Wayne Young/
SPE, AU 2627